REMARKS

In the Office Action mailed March 21, 2005, Claims 1-7 are presently pending (claims 8-17 were restricted out, and are cancelled by this amendment). The Examiner rejected claims 3 & 7 under 37 CFR 1.142(b) as failing to comply with the enablement requirement. In addition, the Examiner rejected claims 1, 2 and 4-6 under 35 U.S.C. 102(e) as being anticipated by Chuah et al (U.S. Patent Number 6,577,644). Applicants traverse the rejections and respectfully request reconsideration.

I. The Chuah Reference

The Chuah reference describes a multilink point-to-point protocol (PPP) session for providing a more flexible quality of service (QoS) support in a wireless environment. In particular, the multilink PPP session allows transmission of a message containing data to an opposite PPP peer, where the message identifies the number and types of classes on a particular PPP link. (See Chuah abstract) The Chuah reference describes a multilink PPP session including multiple links (i.e., separate physical channels) within *one* PPP session. The multilink PPP session offers link aggregation: the ability to split and recombine packets to thereby use the multiple links as a single virtual link with increased capacity. (See Request for Comments (RFC) 1717, page 2).

Chuah's invention is an improvement over prior art multilink PPP (as defined, e.g., by IETF RFC 1717) that establishes *one* multilink PPP session in which PPP peers includes a "non-Sharing QoS Negotiation" option message. The Non-sharing QoS option message allows a PPP peer to specify the number of classes to be carried on a particular link in the multilink PPP session. PPP frames with various class numbers will be carried over one particular link

while the rest of the PPP frames will be segmented, or fragmented, and carried over the two remaining links. (See Chuah, col. 4 lines 4-30).

II. The Claimed Invention

The presently claimed invention provides a method for supporting *multiple* PPP sessions between two entities in a soft handoff within a wireless communication environment. In such a situation, each PPP session carries redundant datagrams between the peers. The datagrams are not split or fragmented for transmission over multiple links (as in multilink PPP link aggregation); instead identical datagrams are transmitted along the multiple PPP sessions. As a result of the redundant datagrams, the invention provides for data integrity assurance by discarding packets containing errors, while retaining the redundant datagrams that are error free.

As recited in independent claims 1, 4 and 5, at least two PPP sessions are established for redundant transmission of datagrams. There are two management planes that effectively isolate the PPP protocol entities. A first management plane located on an upper layer of the PPP sessions, receives processed datagrams from the PPP sessions, compares the processed datagrams with each other to determine the processed datagrams having errors, selects an error free one of the processed datagrams, and transmits the selected processed datagram to the network layer. A second management plane located on a lower layer of the PPP sessions receives the datagrams, classifies the received datagrams, and transmits each of the received datagrams to the PPP session corresponding to the datagram, respectively.

III. Response to Rejections/Objections

Claims 3 and 7 are rejected under Section 112, first paragraph, as failing to comply with the enablement requirement. The Examiner states that claims 3 and 7 contain subject matter which was not described in the specification in such a way to enable one skilled in the art to which it pertains, or with which it is mostly nearly connected, to make and/or use the invention. Specifically, the Examiner questions the steps of comparing datagrams and deleting datagrams having errors.

The Applicants respectively traverse the Examiner's objections on a number of grounds. One of ordinary skill in the art would know that comparisons may be performed by simply observing the differences between the datagrams with respect to errors. Redundant datagrams may be compared with each other by observing the datagrams which contain minimum errors, or are error free. Further, methods of determining errors are inherent in a standard PPP, as shown in RFC 1547 ("Requirements for an Internet Standard Point-to-Point Protocol"), section 2.8.

As noted above, the Examiner rejected claims 1, 2, and 4-6 under Section 102(e) as being anticipated by Chuah. Regarding claims 1 and 4, the Examiner states that Figure 4 in Chuah teaches Peer A establishing multiple PPP sessions with Peer B whereby the sessions are classified, processed, and selected by the Peers by the QoS options within the datagram. The Examiner further states that all the datagrams are received from the physical layer. (See Chuah, col 4, lines 1-32)

The Applicants respectively traverse the Examiner's objections on a number of grounds. The Applicants submit that Chuah nowhere teaches establishing *multiple* PPP

sessions for redundant data. Furthermore, the claimed invention recites classification and processing associated with the *individual* PPP sessions. Thus, Chuah's description of links used for a particular QoS over an *aggregated* Multilink PPP do not anticipate the claimed invention. In Chuah's invention, only one multilink PPP session is described. The multilink PPP session should not be confused with multiple PPP sessions of the Applicants' invention.

In particular, Chuah does not teach or suggest establishing at least two independent PPP sessions for redundant transmission of datagrams as recited in claims 1 and 4. Instead, Chuah teaches establishing *one* multilink PPP session which transmits packets of data in a message to an opposite PPP peer, where the message identifies the number, and types of classes on a particular link. (See Chuah, col. 6 lines 9-13).

Further, Chuah nowhere discloses or suggests selecting one of the processed datagrams and transmitting the selected datagram to the network layer, as recited in claims 1 and 4. Chuah's multilink PPP session does not keep track of which datagram to select from multiple PPP sessions because only one session is established in Chuah's multilink PPP.

In view of the arguments set out above it is submitted that claims 1 and 4, as now amended are allowable under 35 USC 102.

Regarding claim 5, Chuah does not disclose or suggest establishing a plurality of PPP sessions for redundant transmission of datagrams, as recited in claim 5. The argument addressing the Examiner's concern regarding claim 5 is as set forth above for claims 1 and 4. Further, Chuah nowhere discusses (i) a first management plane located on an upper layer of the PPP sessions, for selecting a corresponding one of the datagrams received from the PPP sessions, and transmitting the selected datagram to the network layer, and (ii) a second management plane located on an under layer of the PPP sessions, for classifying datagrams

received from a physical layer, and transmitting each of the datagrams to the PPP session corresponding to the datagram, respectively, as recited in claim 5. In particular, Chuah's multilink PPP session does not require a management plane to keep track of which datagram to select from multiple PPP sessions, such that the selected datagram is transmitted on a particular PPP session, because only one session is established in Chuah's multilink PPP.

In view of the argument set out above it is submitted that claim 5, as now amended is allowable under 35 USC 102.

It is submitted that claims 2-3 are allowable as being claims dependent upon an allowable claim, claim 1.

It is further submitted that claims 6-7 are allowable as being claims dependent upon an allowable claim, claim 5.

IV. Conclusion

The Applicants submit that the application is in good and proper form for allowance and respectfully request the Examiner to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney, at 312-913-3305.

Respectfully submitted,

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